506539777 03/05/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6586555

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SANGXIA HUANG	05/05/2020
ANDERS ISBERG	05/06/2020
OLIVIER MOLINER	05/05/2020
ANDREJ PETEF	05/05/2020

RECEIVING PARTY DATA

Name:	SONY EUROPE BV	
Street Address:	THE HEIGHTS, BROOKLANDS	
City:	WEYBRIDGE	
State/Country:	ate/Country: UNITED KINGDOM	
Postal Code: KT13 0XW		

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	17193024	

CORRESPONDENCE DATA

Fax Number: (216)592-5009

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2165925000

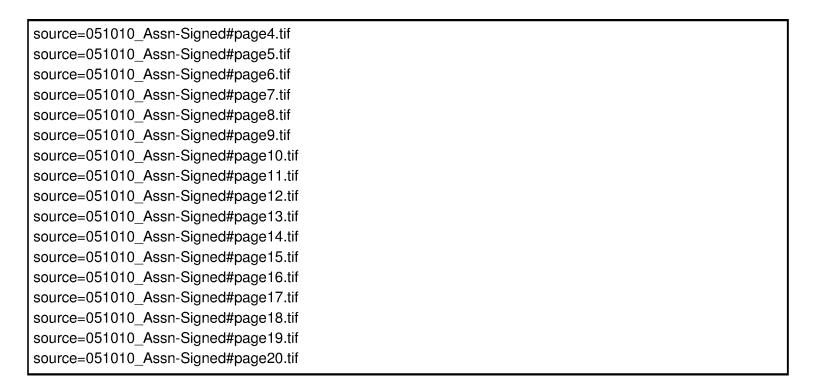
Email: patents@tuckerellis.com **Correspondent Name:** TUCKER ELLIS, LLP

Address Line 1: 950 MAIN AVE, SUITE 1100 Address Line 4: CLEVELAND, OHIO 44113

ATTORNEY DOCKET NUMBER:	014333-051010
NAME OF SUBMITTER:	M. DAVID GALIN
SIGNATURE:	/M.David Galin/
DATE SIGNED:	03/05/2021

Total Attachments: 20

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FULL INVENTOR ASSIGNMENT AND FULL ASSIGNMENT FROM SONY EUROPE BV TO SONY CORPORATION

WHEREAS, I, as a named inventor listed on the attached APPENDIX (hereinafter referred to as "APPENDIX"), have invented certain new and useful improvements in the invention(s) listed on the same, for which an application for Letters Patent was executed on the priority date included thereon:

AND WHEREAS, SONY EUROPE BV, a corporation organized and existing under the laws of the Netherlands, with offices at The Heights, Brooklands, Weybridge, Surrey, KT13 0XW, United Kingdom (hereinafter referenced as "ASSIGNEE SEU"), in accordance with my employment agreement and/or with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, is desirous of acquiring my entire right, title and interest in, to and under said invention(s), said application(s) disclosing the invention(s) and in, to and under any Letters Patent or similar legal protection which may be granted therefor in any and all countries worldwide (including in the territory of the United States of America);

AND WHEREAS, SONY CORPORATION, a corporation organized and existing under the laws of Japan, with offices at 1-7-1 Konan, Minato-ku, Tokyo 108-0075, Japan (hereinafter referenced as "ASSIGNEE SONY") is desirous of acquiring the entire right, title and interest in, to and under said invention(s), said application(s) disclosing the invention(s) and in, to and under any Letters Patent or similar legal protection which may be granted therefor in any and all countries worldwide (including in the territory of the United States of America but excluding in the territory of Albania where ASSIGNEE SEU shall remain a co-owner with ASSIGNEE SONY) held by ASSIGNEE SEU as the sole owner to the rights by this assignment;

NOW THEREFORE, after good and valuable consideration or in consideration of the recognized value of any past and/or potential collaborative projects in the future, the receipt and sufficiency of which are hereby acknowledged, I, as an inventor as indicated above, by these presents do hereby assign, sell and transfer unto said ASSIGNEE SEU, the entire right, title and interest in and to the said invention(s), said application(s), including any divisions, continuations, substitutions and renewals thereof, and in and to any and all Letters Patent which may be granted for said invention(s), in any country (including the territory of the United States of America), and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents or other industrial property protection throughout the world (including in the territory of the United States of America) in respect of the inventions which are the subjects of the applications for Letters Patent described herein, and this conveyance of interest includes the right for the ASSIGNEE SEU, or its successors, assigns, and/or legal representatives, to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership, of any of the Patents or any

patents granted on any of the applications for patents or filed as aforesaid, whether occurring before, on or after the date of this agreement.

I, as an inventor, further declare that I either have the obligation to assign or have already assigned the full and exclusive rights in and to any inventions made during my employment to said ASSIGNEE SEU based on my employment contract with said ASSIGNEE SEU, and/or that said ASSIGNEE SEU has obtained full and exclusive rights in and to any such inventions based on applicable national law or in accordance with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, and that by this Assignment such transfer of right, title and interest in such inventions to said ASSIGNEE SEU is herewith confirmed or restated.

CONCURRENTLY HEREWITH, after good and valuable consideration or in consideration of the recognized value of any past and/or potential collaborative projects in the future, the receipt and sufficiency of which are hereby acknowledged, ASSIGNEE SEU has already assigned by other means to said ASSIGNEE SONY, or by these presents do hereby presently assign, sell and transfer unto said ASSIGNEE SONY, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention(s), said application(s), including any divisions, continuations, substitutions and renewals thereof, and in and to any and all Letters Patent which may be granted for said invention(s), in any country (including the territory of the United States of America but excluding the territory of Albania where ASSIGNEE SEU shall remain a co-owner with ASSIGNEE SONY), and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements, and to any other benefits accruing or to accrue to ASSIGNEE SEU with respect to the filing of applications for patents or securing of patents or other industrial property protection throughout the world (including in the territory of the United States of America but excluding in the territory of Albania where ASSIGNEE SEU shall remain a co-owner with ASSIGNEE SONY) in respect of the inventions which are subjects of the applications for Letters Patent described herein, and this conveyance of interest includes the right for the ASSIGNEE SONY, or its successors, assigns, and/or legal representatives, to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership, of any of the Patents or any patents granted on any of the applications for patents or filed as aforesaid, whether occurring before, on or after the date of this agreement.

The undersigned inventor and ASSIGNEE SEU hereby authorize and request the Commissioner of Patents of the United States and its territorial possessions, and other appropriate officials whose duty it is to issue patents in any country in the world, to issue any and all patents resulting from the aforesaid patent applications or any divisions, continuations, substitutions and renewals thereof, when granted, to ASSIGNEE SONY, as the assignee of the full right, title and interest in and to the same (or in the case of Albania to ASSIGNEE SEU and ASSIGNEE SONY as co-assignees);

The undersigned inventor and ASSIGNEE SEU further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE SONY, or its designee or successors, without further remuneration, in order to perfect title in said invention(s),

modifications, and improvements in said invention(s), applications and Letters Patent in any country in the world (including in the territory of the United States of America);

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The undersigned inventor and ASSIGNEE SEU further agree that ASSIGNEE SONY will, upon request, be provided promptly with all pertinent facts and documents relating to said application(s), said invention(s) and said Letters Patent and legal equivalents in foreign countries as may be known and accessible and will testify as to the same in any interference or litigation related thereto;

The undersigned inventor and ASSIGNEE SEU hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale;

And the undersigned inventor and ASSIGNEE SEU hereby authorize and request the attorney(s) of record in this application to insert on the APPENDIX any further identification, including the filing date and application number of the country in which an application for Letters Patent has been or will be subsequently filed, which may be necessary or desirable in order to comply with the rules of the patent office of that country for recordation of this document.

This Assignment Agreement shall be governed by and construed under the laws of the State of New York, United States of America, without regard to conflict of laws principles, all rights and remedies being governed by said laws.

This assignment executed on the dates indicated below.

Sangxia Huang	05 May 2020		
Name of inventor Sangpia	Execution date of this assignment [DD/MONTH/YYYY]		
Signature of inventor			
	SONY EUROPE BV		
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Date: 06 May 2020 [DD/MONTH/YYYY]	By:		
[DD/MONTH/YYYY]	Name: Nicolas Rose Title: IP Senior Manager As duly authorized officer		
	SONY CORPORATION		
m 30/Sentember/2020	MA-		
Date: 30/September/2020 [DD/MONTH/YYYY]	By:	Masayoshi Doshida General Manager Planning & Control Department Intellectual Property Division Sony Corporation	

DocuSign Envelope ID: 9828FB8A-9ED5-4A19-8A1F-635B14DFB548

Assignment inventor to SEU to Sony Corp.

APPENDIX

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U.S. Filing Date		
U.S. Application		
Sony Reference	PS19 0182	
SE Filing Date	26 Mar 20	
SE Application	2050332-2	
Inventors	ISBERG, Anders PETEF, Andrej MOLINER, Olivier HUANG, Sangxin	
Tite	MULTI-VIEW POSITIONING USING REFLECTIONS	

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FULL INVENTOR ASSIGNMENT AND FULL ASSIGNMENT FROM SONY EUROPE BY TO SONY CORPORATION

WHEREAS, I, as a named inventor listed on the attached APPENDIX (hereinafter referred to as "APPENDIX"), have invented certain new and useful improvements in the invention(s) listed on the same, for which an application for Letters Patent was executed on the priority date included thereon;

AND WHEREAS, SONY EUROPE BV, a corporation organized and existing under the laws of the Netherlands, with offices at The Heights, Brooklands, Weybridge, Surrey, KT13 OXW, United Kingdom (hereinafter referenced as "ASSIGNEE SEU"), in accordance with my employment agreement and/or with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, is desirous of acquiring my entire right, title and interest in, to and under said invention(s), said application(s) disclosing the invention(s) and in, to and under any Letters Patent or similar legal protection which may be granted therefor in any and all countries worldwide (including in the territory of the United States of America);

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patents granted on any of the applications for patents or filed as aforesaid, whether occurring before, on or after the date of this agreement.

I, as an inventor, further declare that I either have the obligation to assign or have already assigned the full and exclusive rights in and to any inventions made during my employment to said ASSIGNEE SEU based on my employment contract with said ASSIGNEE SEU, and/or that said ASSIGNEE SEU has obtained full and exclusive rights in and to any such inventions based on applicable national law or in accordance with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, and that by this Assignment such transfer of right, title and interest in such inventions to said ASSIGNEE SEU is herewith confirmed or restated.

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This Assignment Agreement shall be governed by and construed under the laws of the State of New York, United States of America, without regard to conflict of laws principles, all rights and remedies being governed by said laws.

This assignment executed on the dates indicated below.

Anders Isberg 06 maj 2020			
Name of inventor Azuler	Execution date of this assignment [DD/MONTH/YYYY]		
Signature of inventor			
	SONY EUROPE BV		
Date: 14 May 2020 [DD/MONTH/YYYY]	By: Name: Nicolas Rose		
[DD/MONTH/YYYY]	Name: N1CO1as Rose Title: IP Senior Manager As duly authorized officer		
	SONY CORPORATION		
Date: 01 /October/2020 [DD/MONTH/YYYY]	By:		
[DD/MONTH/YYYY]	Name: Title: As duly authorized officer	Musayoshi Doshida General Manager Planning & Control Department Intellectual Property Division Sony Corporation	

DocuSign Envelope ID: 7646B551-0615-48B1-A27A-6464A729B56B

Assignment Inventor to SEU to Sony Corp.

APPENDIX

U.S. Filing Date		
U.S. Application		
Sony Reference	PS19 0182	
SE Filing Date	2050332-2 26 Mar 20	
SE Application	2050332-2	
Inventors	ISBERG, Anders PETEF, Andrej MOLINER, Olivier HUANG, Sangxia	
Title	NIULTEVIEW POSITIONING USING REFLECTIONS	

FULL INVENTOR ASSIGNMENT AND FULL ASSIGNMENT FROM SONY EUROPE BY TO SONY CORPORATION

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AND WHEREAS, SONY EUROPE BV, a corporation organized and existing under the laws of the Netherlands, with offices at The Heights, Brooklands, Weybridge, Surrey, KT13 0XW, United Kingdom (hereinafter referenced as "ASSIGNEE SEU"), in accordance with my employment agreement and/or with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, is desirous of acquiring my entire right, title and interest in, to and under said invention(s), said application(s) disclosing the invention(s) and in, to and under any Letters Patent or similar legal protection which may be granted therefor in any and all countries worldwide (including in the territory of the United States of America);

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This assignment executed on the dates indicated below.

Olivier Moliner		05 maj 2020	
Name of inventor	Execution date of this assignment [1	DD/MONTH/YYYY]	
Signature of inventor			
	SONY EUROPE BV		
Date: 06 May 2020	Bv:		
Date: 06 May 2020 [DD/MONTH/YYYY]	Name: Nicolas Rose Title: IP Senior Manager As duly authorized officer		
	SONY CORPORATION		
Date: 30/Scptember/2020	By:		
[DD/MONTH/YYYY]	Name: Title: As duly authorized officer	Masayoshi Doshida General Manager Planning & Control Department Intellectual Property Division Sony Corporation	

DocuSign Envelope ID: 10EE7004-5A19-442E-AA40-593CF01A382D

Assignment Inventor to SEU to Sony Corp.

APPENDIX

U.S. Filing Date		
U.S. Application		
Sony Reference	PS19 0182	
SE Filing Date	26 Mar 20	
SE Application	2050332-2	
Inventors		
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FULL INVENTOR ASSIGNMENT AND FULL ASSIGNMENT FROM SONY EUROPE BY TO SONY CORPORATION

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NOW THEREFORE, after good and valuable consideration or in consideration of the recognized value of any past and/or potential collaborative projects in the future, the receipt and sufficiency of which are hereby acknowledged, I, as an inventor as indicated above, by these presents do hereby assign, sell and transfer unto said ASSIGNEE SEU, the entire right, title and interest in and to the said invention(s), said application(s), including any divisions, continuations, substitutions and renewals thereof, and in and to any and all Letters Patent which may be granted for said invention(s), in any country (including the territory of the United States of America), and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents or other industrial property protection throughout the world (including in the territory of the United States of America) in respect of the inventions which are the subjects of the applications for Letters Patent described herein, and this conveyance of interest includes the right for the ASSIGNEE SEU, or its successors, assigns, and/or legal representatives, to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership, of any of the Patents or any

patents granted on any of the applications for patents or filed as aforesaid, whether occurring before, on or after the date of this agreement.

I, as an inventor, further declare that I either have the obligation to assign or have already assigned the full and exclusive rights in and to any inventions made during my employment to said ASSIGNEE SEU based on my employment contract with said ASSIGNEE SEU, and/or that said ASSIGNEE SEU has obtained full and exclusive rights in and to any such inventions based on applicable national law or in accordance with a preexisting agreement or mutual understanding between myself and ASSIGNEE SEU, and that by this Assignment such transfer of right, title and interest in such inventions to said ASSIGNEE SEU is herewith confirmed or restated.

CONCURRENTLY HEREWITH, after good and valuable consideration or in consideration of the recognized value of any past and/or potential collaborative projects in the future, the receipt and sufficiency of which are hereby acknowledged, ASSIGNEE SEU has already assigned by other means to said ASSIGNEE SONY, or by these presents do hereby presently assign, sell and transfer unto said ASSIGNEE SONY, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention(s), said application(s), including any divisions, continuations, substitutions and renewals thereof, and in and to any and all Letters Patent which may be granted for said invention(s), in any country (including the territory of the United States of America but excluding the territory of Albania where ASSIGNEE SEU shall remain a co-owner with ASSIGNEE SONY), and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents. Designs and Industrial Models, and any other international agreements, and to any other benefits accruing or to accrue to ASSIGNEE SEU with respect to the filing of applications for patents or securing of patents or other industrial property protection throughout the world (including in the territory of the United States of America but excluding in the territory of Albania where ASSIGNEE SEU shall remain a co-owner with ASSIGNEE SONY) in respect of the inventions which are subjects of the applications for Letters Patent described herein, and this conveyance of interest includes the right for the ASSIGNEE SONY, or its successors, assigns, and/or legal representatives, to bring, make, oppose, defend, appeal proceedings, claims or actions and obtain relief (and to retain any damages recovered) in respect of any infringement, or any other cause of action arising from ownership, of any of the Patents or any patents granted on any of the applications for patents or filed as aforesaid, whether occurring before, on or after the date of this agreement.

The undersigned inventor and ASSIGNEE SEU hereby authorize and request the Commissioner of Patents of the United States and its territorial possessions, and other appropriate officials whose duty it is to issue patents in any country in the world, to issue any and all patents resulting from the aforesaid patent applications or any divisions, continuations, substitutions and renewals thereof, when granted, to ASSIGNEE SONY, as the assignee of the full right, title and interest in and to the same (or in the case of Albania to ASSIGNEE SEU and ASSIGNEE SONY as co-assignees);

The undersigned inventor and ASSIGNEE SEU further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE SONY, or its designee or successors, without further remuneration, in order to perfect title in said invention(s).

modifications, and improvements in said invention(s), applications and Letters Patent in any country in the world (including in the territory of the United States of America);

The undersigned inventor and ASSIGNEE SEU further agree to properly execute and deliver and without further remuneration or consideration, such necessary or desirable and lawful papers for application(s) for foreign patents, for filing subdivisions of said application(s) for patent, and/or for obtaining any reissue or reissues of any Letters Patent which may be granted for the aforesaid invention(s), as ASSIGNEE SONY shall hereafter require and prepare at ASSIGNEE SONY's own expense;

The undersigned inventor and ASSIGNEE SEU further agree that ASSIGNEE SONY will, upon request, be provided promptly with all pertinent facts and documents relating to said application(s), said invention(s) and said Letters Patent and legal equivalents in foreign countries as may be known and accessible and will testify as to the same in any interference or litigation related thereto:

The undersigned inventor and ASSIGNEE SEU hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale;

And the undersigned inventor and ASSIGNEE SEU hereby authorize and request the attorney(s) of record in this application to insert on the APPENDIX any further identification, including the filing date and application number of the country in which an application for Letters Patent has been or will be subsequently filed, which may be necessary or desirable in order to comply with the rules of the patent office of that country for recordation of this document.

This Assignment Agreement shall be governed by and construed under the laws of the State of New York, United States of America, without regard to conflict of laws principles, all rights and remedies being governed by said laws.

This assignment executed on the dates indicated below.

Andrej Petef			05 May 2020		
Name	of inventor	Andrej Petel	Execution date of this assignment [DD/MONTH/YYYY]		
Signat	ure of inventor				
			SONY EUROPE BV		
Date: 06 May 2020 [DD/MONTH/YY	06 May 2020		By		
	[DD/MONTH/YYY	(Y)	Name: Nicolas Rose Title: IP Senior Manager As duly authorized officer		
			SONY CORPORATION		
Date:	30/September/2020		By:		
e searcht •	30/September/2020 [DD/MONTH/YYY	(Y)	Name: Masayoshi Doshida Title: General Manager As duly authorized officer Planning & Control Department Intellectual Property Division Sony Corporation		

DocuSign Envelope ID: AA5F9EE0-5E94-AA6-86F5-CC2B31745051

Assignment Inventor to SEU to Sony Corp.

RECORDED: 03/05/2021

APPENDIX

U.S. Filing Date		
U.S. Application		
Sony Reference	PS19 0182	
SE Filing Date	26 Mar 20	
SE Application	2050332-2	
Inventors	ISBERG, Anders PETEF, Andrej MOLINER, Olivier HUANG, Sangxia	
Tide	MULTI-VIEW POSITIONING USING REFLECTIONS	